D. Amendment to the Claims

Please amend claims 1, 3, 9 and 10 as follows.

1. (Currently Amended) An optical waveguide device comprising:

an optical waveguide layer; and

a light-receiving element,

wherein the optical waveguide layer is ~~being~~ provided with a first light direction-altering means including a reflector, which alters the direction of a light propagated in the optical waveguide layer and directs the light to the light-receiving element,

wherein the light-receiving element is ~~being~~ provided with a plurality of light-receiving portions, and

wherein each of the light-receiving portions is ~~being~~ capable of receiving a signal ~~signals~~ independently.

2. (Original) The optical waveguide device according to claim 1, wherein the optical waveguide layer is further provided with a light-emitting element, and a second light direction-altering means for receiving light emitted from the light-emitting element at an angle to an in-plane direction of the optical waveguide layer, wherein the second light direction-altering means and the light-emitting element are in such a relative position that light emitted from the light-emitting element is directed into the optical waveguide layer.

3. (Currently Amended) The optical waveguide device according to claim 1 or 2, wherein the light-receiving element comprises the [[a]] plurality of light-receiving portions arranged in a circular form, and the first light direction-altering means allows the light-receiving element to receive the light propagated from all directions in the optical waveguide layer, and the light-receiving element discriminates a [[the]] transmitting source of the received light based on a light intensity distribution that varies depending on the position of the transmitting source of light.

4. (Original) The optical waveguide device according to claim 3, wherein the first light direction-altering means is in a form of a hemispheric or conic structure embedded in the optical waveguide layer.

5. (Original) The optical waveguide device according to claim 1 or 2, wherein the light-receiving element includes at least a plurality of light-receiving portions that are linearly arranged, and the first light direction-altering means allows the light-receiving element to receive light propagated from a predetermined region in the optical waveguide layer, and the light-receiving element discriminates the transmitting source of the received light based on a light intensity distribution that varies depending on the position of the transmitting source of light.

6. (Original) The optical waveguide device according to claim 5, wherein the first light direction-altering means is in a form of a half cylindrical or triangular structure laid sideways and embedded in the optical waveguide layer.

7. (Previously Presented) The optical waveguide device according to claim 3, wherein the device is configured to propagate incident light from the light-emitting element in every direction in the optical waveguide layer, and to detect the optical signal discriminating the position of the light-emitting element by using the light-receiving element, so as to simultaneously receive optical signals from a plurality of light-emitting elements in the same optical waveguide layer with one single light-receiving element.

8. (Previously Presented) The optical waveguide device according to claim 3, wherein the device is configured to propagate incident light from the light-emitting element at a specific emission angle in the optical waveguide layer, and to detect the optical signal by the light-receiving element discriminating the position of the light-emitting element so as to simultaneously receive optical signals from a plurality of light-emitting elements in the same optical waveguide layer with one single light-receiving element.

9. (Currently Amended) The optical waveguide device according to claim 5, wherein the device is configured to propagate incident light from [[the]] light-emitting elements as parallel beams in a specific direction in the optical waveguide layer,

and to detect the optical signals by the light-receiving element discriminating the positions of the light-emitting elements so as to simultaneously receive optical signals from the ~~a plurality of~~ light-emitting elements in the same optical waveguide layer with the [[one single]] light-receiving element.

10. (Currently Amended) An optical waveguide device comprising:

a waveguide layer;[[,]]

a plurality of light-emitting elements;[[,]]

a plurality of light direction-altering means for the light-emitting elements; ~~means;~~

a plurality of light-receiving elements; and

a plurality of light direction-altering means for the light-receiving elements,

wherein the light direction-altering ~~a light direction altering~~ means for at least one of (i) the plurality of the light-receiving elements or (ii) the plurality of the light-emitting elements comprises a reflector, and the light emitted from the light-emitting elements propagates in the waveguide layer and is reflected by the light direction-altering means for at least one of (i) the plurality of the light-receiving elements or (ii) the plurality of the light-emitting elements such that reflected light is incident on at least one of the light-receiving elements,

wherein the light emitted from the plurality of light-emitting elements is incident on the at least one of the light-receiving elements via the light direction-altering means for at least one of (i) the plurality of the light-receiving elements or (ii) the plurality of the light-emitting elements,

wherein the at least one of the light-receiving elements is provided with a plurality of light-receiving portions, and

wherein each of the light-receiving portions is capable of receiving a signal independently ~~and a light-receiving element are configured so that:~~

~~(a) incident light is propagated from the light-emitting element:~~

~~(i) in every direction in the waveguide layer;~~

~~(ii) at a specific emission angle in the waveguide layer; and/or~~

~~(iii) as parallel beams in a specific direction in the waveguide layer;~~ and

~~(b) an optical signal is detected discriminating the position of a light-emitting element to simultaneously exchange a plurality of optical signals in the same optical waveguide layer~~.

11. (Previously Presented) The optical waveguide device according to claim 1 or 10, wherein an electric wiring is provided on the surface of the optical waveguide layer to drive the optical element.

12. (Previously Presented) The optical waveguide device according to claim 1 or 10, wherein the device further comprises a relay means that receives propagated light, performs optical/electric (OE) conversion, performs electric/optical (EO) conversion to reproduce optical signals, and causes the light to propagate in the optical waveguide layer in a predetermined mode of propagation.

13. (Previously Presented) A layered substrate comprising an electric circuit board and an optical waveguide device according to claim 1 or 10 provided thereon with electric connections to operate an electronic equipment where interconnection of all or a part of the signals from the electric circuit is carried out by exchange of optical signals through the optical waveguide device.

14. (Original) The layered substrate according to claim 13, wherein the optical waveguide device is embedded within an electric circuit multilayer substrate.

15. (Previously Presented) The layered substrate according to claim 13, wherein the optical waveguide device is multilayered and connected to an electric circuit board and an electronic chip.

16. (Previously Presented) An electronic equipment having an optical wiring using a layered substrate according to claim 13 and multi-bit wirings between a plurality of electronic chips for system operation.